


IN THE CLAIMS

Please cancel claims 1-20 without prejudice or disclaimer.

Please add the following new claims 21-44.


For the Examiner's convenience, all pending claims are listed below. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

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21. (New) An isolated polypeptide selected from the group consisting of:
- a) a polypeptide comprising an amino acid sequence of SEQ ID NO:1,
  - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to an amino acid sequence of SEQ ID NO:1, and
  - c) an immunogenic fragment of a polypeptide consisting of an amino acid sequence of SEQ ID NO:1, wherein said fragment comprises at least 5 contiguous amino acid residues of SEQ ID NO:1.
22. (New) An isolated polypeptide of claim 21 comprising an amino acid sequence of SEQ ID NO:1.
23. (New) An isolated polynucleotide encoding a polypeptide of claim 21.
24. (New) An isolated polynucleotide encoding a polypeptide of claim 22.
25. (New) An isolated polynucleotide of claim 24 comprising a polynucleotide sequence of SEQ ID NO:2.
26. (New) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 23.
27. (New) A cell transformed with a recombinant polynucleotide of claim 26.
28. (New) A method of producing a polypeptide of claim 21, the method comprising:

- a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 21, and
- b) recovering the polypeptide so expressed.

29. (New) A method of claim 28, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO:1.

30. (New) An isolated polynucleotide selected from the group consisting of:

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- a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:2,
  - b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:2,
  - c) a polynucleotide complementary to a polynucleotide of a),
  - d) a polynucleotide complementary to a polynucleotide of b), and
  - e) an RNA equivalent of a)-d).

31. (New) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 30, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

32. (New) A method of claim 31, wherein the probe comprises at least 60 contiguous nucleotides.

33. (New) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 30, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

34. (New) A composition comprising a polypeptide of claim 21 and a pharmaceutically acceptable excipient.

35. (New) A composition of claim 34, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO:1.

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*conf.*  
36. (New) A method for treating a disease or condition associated with decreased expression of functional LRSP, comprising administering to a patient in need of such treatment the composition of claim 34.

37. (New) A method of screening for a compound that specifically binds to the polypeptide of claim 21, the method comprising:

- a) combining the polypeptide of claim 21 with at least one test compound under suitable conditions, and
- b) detecting binding of the polypeptide of claim 21 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 21.

38. (New) A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 25, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
- b) detecting altered expression of the target polynucleotide, and
- c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

39. (New) A method of assessing toxicity of a test compound, the method comprising:

- a) treating a biological sample containing nucleic acids with the test compound,

- b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 30 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 30 or fragment thereof,
- c) quantifying the amount of hybridization complex, and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

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*Conclude* 40. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 23.

41. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

- a) labeling the polynucleotides of the sample,
- b) contacting the elements of the microarray of claim 40 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and
- c) quantifying the expression of the polynucleotides in the sample.

42. (New) An isolated antibody which specifically binds to a polypeptide of claim 21.

43. (New) The antibody of claim 42, wherein the antibody is:

- a) a chimeric antibody,
- b) a single chain antibody,
- c) a Fab fragment,
- d) a F(ab')<sub>2</sub> fragment, or
- e) a humanized antibody.

44. (New) A composition comprising an antibody of claim 42 and an acceptable excipient.